

## Sidney W. Bijou: The Illinois Years, 1965–1975

Edward K. Morris  
University of Kansas

Sidney W. Bijou is among the founders of behavior analysis, but the record of his contributions is incomplete. It has not systematically described his contributions beyond his tenure at the University of Washington (1948–1965). The purpose of this paper is to describe his contributions over the course of the next decade—his years at the University of Illinois (1965–1975). I begin by reviewing his education and training, contributions at Washington, and why he left and moved to Illinois. Then, I describe his Illinois years: his appointments, colleagues, and service; the Child Behavior Laboratory; grant funding and publications; further service, awards, and recognition; and influence on his colleagues, students, classroom teachers and research supervisors, and visiting scholars. Bijou is modest about his contributions at Illinois, but he advanced the field in many ways over the course of the decade, especially the careers of his colleagues and students.

*Key words:* Sidney W. Bijou, University of Illinois, Child Behavior Laboratory, history of behavior analysis

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Sidney W. Bijou is among the founders of behavior analysis. He started seminal demonstration and training programs, undertook the first systematic program of research in child behavior, established a behavior-analytic theory of child development, and established applied behavior analysis in developmental disabilities. These contributions are well documented in a number of interviews (see Krasner,

1977; Wesolowski, 2002) and autobiographical works (see Bijou, 1996, 1999, 2001; [www.sidneywbijou.com](http://www.sidneywbijou.com)), but the historical record is mainly limited to his years at the University of Washington (1948–1965). This is appropriate: Washington was where he made his seminal contributions. However, this was not where his career ended. He spent another 10 years at the University of Illinois (1965–1975), another 18 at the University of Arizona (1975–1993), and eight more at the University of Nevada–Reno (1993–2001). This paper describes the record of Bijou's contributions during his Illinois years.

I begin by briefly reviewing his education and training, early professional career, years at Washington, and departure for Illinois. Then, for his Illinois years, I describe his initial appointments, colleagues, and service; the Child Behavior Laboratory (CBL); grant funding and publications; further service, awards, and recognition; and influence on his colleagues, undergraduate students, CBL teachers and research supervisors, visiting scholars, and doctoral students. I conclude with an evaluation of his accomplishments at Illinois.

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Correspondence may be sent to the Department of Applied Behavioral Science, Dole Human Development Center, University of Kansas, 1000 Sunnyside Avenue, Lawrence, Kansas 66045 (e-mail: [ekm@ku.edu](mailto:ekm@ku.edu)).

## BEFORE THE UNIVERSITY OF ILLINOIS

### EDUCATION AND TRAINING

Bijou was born on November 12, 1908, in Arlington, Maryland, but moved with his family to Brooklyn, New York, when he was 10 years old. After completing high school in 1928, he matriculated at Lehigh University on a football scholarship with plans to major in electrical engineering. However, neither football nor engineering was enough to his liking, so he transferred to the University of Florida in 1930 and graduated in 1933 with a major in business administration and a budding interest in psychology. Returning to New York City, he married Janet Rose Tobias in 1934 and enrolled in the master's degree program in psychology at Columbia University.<sup>1</sup>

At Columbia, he was drawn to behaviorism by Robert S. Woodworth's course on schools of psychology. After reading John B. Watson's (1919) *Psychology from the Standpoint of a Behaviorist* and *Behaviorism* (Watson, 1930), he wrote Watson, asking him to recommend a topic for his thesis. Watson suggested that he study how children learn "muscle sense," that is, how they learn through proprioceptive feedback, but Bijou could not find a supervisor for the project. During the course of his master's program, he took a summer internship at Letchworth Village, New York, an institution for children with mental retardation, where he noted their lack of education and training. Mental retardation later became a focal point of his career, beginning with his mas-

ter's thesis, a nonverbal intelligence test for children with retardation (Bijou, 1938). On completing his MA requirements, he took additional courses at Columbia's affiliate program in education—the Teacher's College—where he developed an interest in Kurt Lewin's (1935) field-theoretic Gestalt psychology.

Bijou received his MA in 1937 and would have continued in Columbia's doctoral program, but he found it too eclectic. So, instead, he took a position as a clinical psychologist at the State Hospital and Mental Hygiene Clinic in Farmhurst, Delaware, where he and Joseph Jastak developed the Wide Range Achievement Test (Jastak & Bijou, 1941). In 1939, he applied to the doctoral program in psychology at the University of Iowa to work with Lewin and was accepted. On his arrival, however, he found that Lewin was not in the department, but at the Iowa Child Welfare Station. Although he took courses from Lewin, his interests shifted to those of his adviser, Kenneth W. Spence, who worked in the tradition of Clark L. Hull's (1943) drive-reduction learning theory. Combining Spence's (1956) research on approach-avoidance conditioning, Pavlov's (1941) work on experimental neurosis in discrimination training, and his own interest in clinical child psychology, Bijou earned a doctorate in 1941 for research on experimental neurosis in rats (Bijou, 1942, 1943). He was Spence's second student.

### EARLY CAREER

Bijou's first postdoctoral clinical position was at the Wayne County Training School in Northville, Michigan, a residential facility for predelinquent youths with mental retardation. With America's entry into World War II, though, he took a military commission in the Army Air Force (1942–1946), eventually directing its Convalescent Branch in the Psychology Division at the Office of the Surgeon

<sup>1</sup> This date is based on Bijou's last known vita—November 17, 1999—and from biographical information in Etzel, LeBlanc, and Baer (1977). It differs, though, from that found in some of the Bijou interviews and his autobiographical works, as do other dates and activities. In the main, I rely on Bijou's 1999 vita and Etzel et al.'s vita-like presentation of his accomplishments.

General. Afterward, he returned to the Wayne County Training School, but was soon recruited by B. F. Skinner to direct the new clinical training program at Indiana University (1946–1948), where he audited courses taught by J. R. Kantor and Skinner.

#### UNIVERSITY OF WASHINGTON

In 1948, Bijou moved to the University of Washington as an associate professor of psychology and the director of its well-regarded Institute of Child Development. Under his leadership, the Institute soon comprised a Child Development Clinic (CDC), nursery school classrooms, and a research laboratory. Because Bijou's years at Washington have been described in detail elsewhere, I restrict my review to work there that presaged his Illinois years.

#### *The Experimental Analysis of Child Behavior*

Consistent with his graduate training, Bijou began a research program on child behavior based on Sears's (1947a) Hullian-based psychodynamic social learning theory. One of Sears's (1947b) methods was to record children's play with dolls and interpret it in terms of the theory (e.g., frustration, aggression). Bijou, however, found the method unsatisfactory. It was neither experimental in the between-subjects Hull–Spence tradition nor in the within-subject approach he had gleaned from Skinner at Indiana and from reading Skinner's (1953) just-published *Science and Human Behavior*. So, he tried both methods, but did not find the former conducive to a functional analysis of individual behavior (e.g., Bijou, 1955) and thus turned to within-subject methods. With these, he studied schedules of reinforcement and stimulus control in what was the first systematic program of research in the experimental analysis of child behavior (e.g., Bijou, 1957a, 1957b, 1961; see Kazdin, 1978, pp. 179–181).

In 1957, at Bijou's behest, the psychology department hired Donald M. Baer (University of Chicago), who developed a program of research with children on positive and negative reinforcement and generalized imitation (e.g., Baer, 1960; Baer, Peterson, & Sherman, 1967). Bijou then hired Robert Orlando (University of Connecticut) to direct a child research laboratory at the Rainier State School in Buckley, Washington, funded by the National Institute of Mental Health (NIMH). Orlando extended Bijou's research to children with mental retardation (e.g., Orlando & Bijou, 1960; Orlando, Bijou, Tyler, & Marshall, 1960). In 1961, the psychology department hired Jay S. Birnbrauer (Indiana University), with whom Bijou was soon collaborating.

#### *Harvard University*

Supported on an NIMH senior fellowship, Bijou took a year's postdoctoral leave to work with Skinner at Harvard University (1961–1962). There, he conducted research with children on stimulus control (e.g., abstraction; Bijou, 1968d); attended Harvard's pigeon staff meetings (see Catania, 2002); audited Skinner's course on science and human behavior; and worked on programmed instruction with James G. Holland in Skinner's teaching machine project (Bijou, 1965c). He also surveyed the northeast's programs for the education and training of children with mental retardation and noted again how little was being done for them.

#### *Back at Washington*

Convinced he could do better, he returned to Washington to apply the principles of operant behavior in the interests of children with developmental disabilities and problem behavior (see Bijou, 1965b). He established an experimental classroom at the Rainier State School that he and Birnbrauer had planned before he left. Its classroom consultant was

Montrose M. Wolf (Arizona State University), who Bijou hired in 1962. The aim of the program was “to demonstrate that operant principles could be successfully applied to teach academic skills to retarded children, and to develop programmed materials for academic and social learning” (Bijou, 1996, p. 57). Over the next 3 years, he and his colleagues established a classroom token economy system, refined time-out procedures, and developed programmed instruction in reading, writing, and arithmetic (e.g., Bijou, Birnbrauer, Kidder, & Tague, 1966; Birnbrauer, Wolf, Kidder, & Tague, 1965; Tague, Kidder, & Bijou, 1967). The classrooms were the prototypes of his CBL classrooms at Illinois (Bijou, 1996).

Asked by a psychiatric hospital to consult on the case of a young boy with autism, Bijou offered the case to Wolf and Todd R. Risley, then a graduate student. The boy’s chronic aberrant behavior was interfering with his need to wear glasses, lest he go blind. The application of operant conditioning to this behavior was the first applied behavior analysis in autism (see Wolf, Risley, & Mees, 1964; see also Risley & Wolf, 1967; Wolf, Risley, Johnston, Harris, & Allen, 1967).<sup>2</sup> Wolf also conducted research with the Institute’s nursery school teachers on children’s classroom problem behavior and the role of teacher attention in shaping and maintaining it (e.g., Harris, Johnston, Kelly, & Wolf, 1964). At the CDC, Robert C. Wahler analyzed how parents contributed to their children’s asocial behavior and showed that mothers could serve as their therapists (Wah-

ler, Winkel, Peterson, & Morrison, 1965), and Robert P. Hawkins independently conducted research on home-based parent training (Hawkins, Peterson, Schweid, & Bijou, 1966). Wahler’s and Hawkins’s work was the genesis of later home-based parent interventions, notably Shearer and Shearer’s (1972) Portage Early Childhood Education Project (established in 1969), which Bijou would champion at Illinois. In sum, according to Kazdin (1978), “Bijou, Wolf, and Baer, and several other investigators ... established the University of Washington as the nucleus of applied operant research” (p. 273).

During this time, Bijou also published the first of his three textbooks with Baer on child development: *Child Development: I. A Systematic and Empirical Theory* (Bijou & Baer, 1961). In it, they set their theory in the context of psychology more broadly, offered a developmental approach to organism–environment interactions, and reviewed the nature of respondent and operant behavior and their interactions (e.g., emotional behavior). Their second textbook was on the universal stage of infancy (Bijou & Baer, 1965), in which they offered an analysis of prenatal and neonatal development, both biological and behavioral, and behavioral interpretations of early motor, social, perceptual, linguistic, and emotional development. In these books, Bijou integrated Skinner’s science and Kantor’s system. As he noted later, “the most promising path [for basic and applied research on child behavior] lay in using Skinner’s experimental theory and methodology and Kantor’s philosophy of science” (Krasner, 1977, pp. 590, 598). That Kantor played a role was not surprising. His interbehaviorism was a variety of field theory (Kantor, 1959; see Midgley & Morris, 1988), and thus resonated with Bijou’s earlier interest in Lewin’s Gestalt psychology.

<sup>2</sup> DeMyer and Ferster (1962) were arguably the first to apply the principles of operant conditioning to the socially important behavior of children with autism, but they failed to include so many of the defining dimensions of applied behavior analysis that it does not warrant being called applied behavior analysis (e.g., the behavioral, analytic, and technological dimensions; see Baer et al., 1968).



### *Leaving Washington*

Bijou's significant contributions notwithstanding, his basic and applied research programs came to an end as his colleagues and staff members, and then he, himself, left Washington. In a 1974 interview with Leonard Krasner (1977), he offered this explanation:

I left because a majority of the psychology department were antagonistic toward the program. It seemed that the better known our work became, the more antagonistic they became. Among other things, when members of the child development program received attractive offers from other universities, no attempt was made to keep them at Washington with counter offers. So when Don decided to go to Kansas, Jay to North Carolina, and Mont to Arizona, I decided to make my dissatisfaction known by leaving, too. (p. 594; see Bijou, 2001, p. 115; Wesolowski, 2002)

Significant political and professional forces were also at work, but these lie beyond the scope of this paper.

### **AT THE UNIVERSITY OF ILLINOIS**

Why Bijou moved to the University of Illinois, in particular, he has not said in print. However, Robert A. Henderson, who was then the chairperson of the Department of Special Education at Illinois at the time, offered the following:

The director of the Institute for Research on Exceptional Children (IREC) was Sam Kirk, whose PhD was in experimental psychology from the University of Michigan. He had a dual appointment in Special Education and Psychology at Illinois, in addition to heading the IREC, although his salary came exclusively from Education. The IREC was one of the first applied research agencies that involved faculty from different departments. Jim Gallagher was a psychologist who obtained his degree with Sarason at Yale; Bernie Farber, a sociologist; T. E. Newland, a school psychologist and school administrator; and Merle Karnes, an early childhood and gifted education specialist who we had lured away from an administrative position with the Champaign Public Schools. The IREC's board of directors included the heads of several state agencies: Public Schools, Mental Health, Public Health, Social Welfare and the heads of the residential

schools for the visually and hearing impaired. Many IREC research projects in those years were in direct response to a need identified by the agencies.

In 1965 I had assumed the role of "executive officer" of the IREC in addition to chair of the Department of Special Education. In April of that year, the Council for Exceptional Children held its annual convention in Seattle. Sam instructed Jim Gallagher and myself to attend Bijou's presentation and talk to him about joining the IREC. Apparently Sam had already talked Bijou into coming, so our job became determining exactly what Bijou required to have in the way of office and research space. Fortunately, we had recently acquired the old (1900) Colonel Wolfe School from the Champaign public schools, and were in the process of completely restoring it to make it functional for Merle's and Bijou's programs.

... I believe that Bijou's salary came from the IREC's budget, and most of his research costs from the indirect cost funds that Sam had accumulated from the various funded research projects. Thus, it should be clear that our Department of Psychology had little to do with recruiting or employing Bijou at Illinois—Sam Kirk was the primary agent. (Robert H. Henderson, personal communication, May 31, 2007)

By this account, Bijou did not move to Illinois because he was attracted to the psychology department or by the promise of colleagues who would later be called behavior analysts. He moved, apparently, because he was recruited by special educators who valued his research and scholarship in developmental disabilities.

However, in an April 13, 1965, letter to Skinner, Bijou implied that the psychology department did play a role: "As you may have heard, it is settled that I will be moving to Illinois in the fall. There is considerable promise there now for a vigorous program in the experimental analysis of children's behavior at all levels" (Harvard University Archives). Some of these levels would likely have been in psychology. The psychology department also played at least a pro forma role in Bijou's recruitment. On May 13, 1965, Lloyd Humphries, its chairperson, asked Skinner to write a letter of recommendation for Bijou. He needed it for the University of Illinois Board of

Regents, so that Bijou could be appointed. On May 20, Skinner wrote,

I have known Sidney Bijou ever since he joined my staff when I was Chairman at Indiana University in 1946. I have followed his recent work particularly closely. He has been extremely successful in applying a scientific analysis to child behavior, showing great originality and industry in pushing difficult experiments through to profitable conclusions. He has been particularly inspiring as a teacher—several of his recent students are already internationally known. I have talked with him fairly recently, and have no reason to think that he will not continue to be an enthusiastic and active researcher in his field for many years to come. He writes well, and has turned out two small books on child behavior that are excellent. I don't need to tell you that both he and his wife are charming people who would contribute greatly to your academic community. (Harvard University Archives)

Whether Bijou was drawn to Illinois by his colleagues in special education or by the considerable promise of “a vigorous program in the experimental analysis of children's behavior at all levels,” some of it likely in psychology, remains unresolved. However, given that the Bijou interviews and his autobiographical works refer equally to his contributions in special education and psychology, his move to Illinois seems to have been jointly determined.

#### INITIAL APPOINTMENTS, COLLEAGUES, SERVICE, AND FUNDING

When Bijou arrived at Illinois, he was appointed a full professor of psychology, a member of IREC, founding director of the CBL, and soon a full professor in the College of Education. At that time at Illinois, operant conditioning was beginning to be applied to societal problems, and Bijou's hiring “helped establish this focus on children” (Kazdin, 1978, p. 271).

#### *Colleagues*

In the psychology department, Bijou found colleagues with related

interests, among them Herbert C. Quay, a clinical child psychologist who would found the *Journal of Abnormal Child Psychology* in 1973 (see also Quay & Werry, 1972); Donald R. Peterson, who was advancing behavioral assessment in place of traditional clinical techniques (e.g., D. R. Peterson, 1965); and Wesley C. Becker. Only Becker, though, was an operant conditioner. As Kazdin (1978) observed,

Becker was influenced by a project in which Bijou had been involved that trained parents to implement behavioral techniques for controlling their child's behavior in the home (Hawkins, Peterson, Schweid, & Bijou, 1966). Becker became more immersed in studying operant techniques with children in the home and, more extensively, in school settings. He was aided by several graduate students, including Charles Madsen, Donald Thomas, K. Daniel O'Leary, and others, who continued to attempt clinical and educational applications throughout the late 1960s. Becker and his colleagues completed a series of classroom studies showing the effects of praise, token reinforcement, and other teacher-implemented interventions in different classrooms. (p. 271)

Becker would also work with Siegfried Engelmann in their Head Start and Follow Through programs at Illinois (Becker & Engelmann, 1978), as well as in direct instruction (Becker & Carnine, 1980) and parent training (Becker, 1971).

The year Bijou was hired, so too were Gordon Paul, a pioneer in clinical trials research on the efficacy of behavior therapy (Paul, 1966; see Paul, 2001), and Leonard P. Ullmann, a leading behavior therapist and textbook author and editor (e.g., Ullmann & Krasner, 1965, 1969). With these additions, Illinois gained recognition as a “behavior modification center in the mid and late 1960s” (Kazdin, 1978, p. 271). The department then hired Carl Berieter, who worked mainly in direct instruction with Englemann (e.g., Berieter & Englemann, 1966), followed by faculty members in what would later be called behavior analysis, beginning with Robert F. Peterson in 1968,

followed by Warren M. Steinman, Gladys B. Baxley, and William H. Redd in the early 1970s. Coming so late, though, these hires could not have been among the reasons Bijou moved to Illinois, unless they were part of the promise for a program in the experimental analysis of child behavior. But still, they were among Bijou's colleagues during these years. He consulted informally on Paul's social-learning program for adult psychiatric patients and worked briefly with Becker in the local schools, but he only published with Peterson (e.g., Bijou & Peterson, 1971) and Redd (Bijou & Redd, 1975).

Later in this paper, I describe Bijou's influence on his students and CBL staff and provide quotations from them about him as a mentor and person. Redd, however, reminded me that Bijou was also a mentor to his faculty colleagues, through

his efforts to encourage people interested in behavioral research and his promotion of young investigators. He was a real mentor to me. ... He [helped] me become a good writer. ... Sid carefully went over my manuscripts with me line by line, patiently making each sentence clearer and clearer. I most remember and appreciate how seriously Sid cared about writing. (William H. Redd, personal communication, June 24, 2007)

Redd later added, "Sid taught me how to be a mentor as he mentored me. What better way to teach?" (William H. Redd, personal communication, November 1, 2007). I can say the same of Redd as one of my mentors.

In addition to Bijou's colleagues at Illinois, others joined him from Washington, notably Barbara D. MacAulay, Marion Ault, and Howard N. Sloane. MacAulay had been a speech therapist in the CDC; Ault had been a CDC preschool researcher and collaborator with Bijou and Peterson (e.g., Bijou, Peterson, & Ault, 1968); and Sloane had been a staff member. At Illinois, he was the CBL's first research supervisor.

### *Service*

In professional service, Bijou was the first editor of the *Journal of Experimental Child Psychology (JECP)*, which he brought with him to Illinois. In 1965, he was an American Psychological Association (APA) convention committee member (1964–1967), member of the nomination committee of the Society for Research in Child Development (SRCD) (1964–1965), APA Council Representative for Division 7 for Developmental Psychology (1965–1967) and its president (1965–1966), and an executive committee member of APA Division 25 for the Experimental Analysis of Behavior (1964–1968). He also consulted with the National Association for Retarded Citizens; the NIMH Clinical Program Project Committee; the Linwood Children's Center (Ellicott, Maryland), a treatment program for children with autism; and universities in Mexico and Brazil.

### *Funding*

In 1964, Bijou was awarded three grants that extended into his Illinois years. They were (a) a 1964–1968 NIMH U.S. Public Health Service grant for a project titled "Retarded Growth," with Birnbrauer as a coinvestigator; (b) a 1964–1967 NIMH U.S. Public Health Service grant for a project titled "Programmed Learning Classroom for Educable Retardates," again with Birnbrauer as a coinvestigator, which funded the Rainier State School classroom; and (c) a 1964–1967 Bureau for the Education of the Handicapped (BEH) U.S. Office of Education grant for a project titled "Research in Remedial Guidance for Young Retarded Children with Behavioral Problems which Interfere with Academic Learning and Adjustment." Because these grants funded ongoing programs of applied research at Washington, Bijou likely did not bring them with him to Illinois.

## THE CHILD BEHAVIOR LABORATORY

Bijou was the founder and director of the CBL (1965–1972). For this, in part, the university remodeled a grade school near campus—the Colonel Wolfe School—that had been built circa 1905. Named after John S. Wolfe, a Civil War colonel and prominent Champaign lawyer, it was designed in part by Walter T. Bailey, the university's first African-American graduate of its School of Architecture. When Bijou arrived, the remodeling had not been completed, so the CBL was housed south of the campus in what Sloane described as “a Quonset hut type structure in the agricultural school area. It was charming in the summer, as the preschool was across from the pig farm which added an olfactory piquancy to it all” (Howard N. Sloane, personal communication, September 2, 2007). When Bijou moved into the Colonel Wolfe School, he shared it with Merle B. Karnes. Also hired in 1975, she conducted research on classroom interventions with young children from low-income families that was influential in the Head Start program (see Karnes & Odom, 1988).

As for the CBL, it comprised two preschool demonstration and training classrooms, with an observation booth between them; an observation booth and six rooms in the basement for research and time-out; and second floor offices for Bijou and his secretary, Dorothy (Dottie) Whelan, research supervisors, and graduate students, along with a seminar room and office for visiting scholars. Although most of Bijou's students had offices in their home departments, many of them also had desks at the Colonel Wolfe School. This was where they conducted research and took evening courses. Among the latter were Bijou's seminars on the behavior analysis of child development, using Bijou and Baer (1961, 1965), and on verbal behavior, using

Skinner (1957), as well as courses offered by his research supervisors—for instance, Jeffrey A. Grimm's seminar on social behavior, using McGinness and Ferster (1971).

The preschool classrooms exemplified Bijou's philosophy of teacher training. In response to Krasner's (1977) question about how that training should proceed, he observed,

At this stage, the problem of teacher training is two-fold: one, how to get colleges of education to introduce behavioral methods and principles; the other, how to spot and retain teachers who are discontented with current classroom practices and their own performance, and offer them training in the behavioral approach. My own inclination is to train by means of demonstration projects. Let teachers actually see what can be done with children, normal and handicapped. Such an approach will attract primarily those who aren't being reinforced by the present system. Sure, you'll get changes in educational practices by means of rules and regulations with all their aversive contingencies, and sure, educators will continue to wait for the next new panacea but, in the long run, demonstrations will do more to change behavior, especially if the training is based on positive reinforcement and the procedures are explicit and self-correcting. (p. 596)

The CBL was Bijou's demonstration and training site.

## GRANT FUNDING

Bijou was awarded seven federal grants, supplements, and extensions at Illinois that funded the CBL and his research, classroom teachers, research supervisors, and graduate students. His supervisors were coinvestigators on the first two of them: (a) a 1965–1968 NIMH U.S. Public Health Service grant for a project titled “Experimental Analysis of [the] Behavior of Retardates,” with Sloane as a coinvestigator (who was succeeded by Peterson) and (b) a 1968–1971 BEH U.S. Office of Education grant for a project titled “Application of Operant Principles to the Special Education of Mentally Retarded and Emotionally Disturbed Preschool Children,” with Thomas E. Sajwaj as a coinvestigator.



These were followed by a 1973–1976 NIMH U.S. Public Health Service grant for a project titled “Methodological Study of Follow-Up Evaluation of Treatment Programs for Handicapped Children.” Bijou also received a 1968–1973 National Institute of Child Health and Development training grant in child development and retardation and a 1974–1979 extension of it in child development alone. The training grants provided 12-month stipends for his graduate students, which allowed them to pursue research independent of teaching and even independent of Bijou when they worked with other faculty members.

#### PUBLICATIONS AND CONTRIBUTIONS

At Illinois, Bijou refined and extended the seminal contributions he had made at Washington. However, if measured by the sheer number of his publications, his Illinois years were his most productive to date. Between 1938 and 1948, he published 17 works and at Washington, he published 22, but at Illinois, he published 50—more than during all his preceding 27 years. The smaller number of publications at Washington, though, was likely due to his administrative responsibilities and the time he had to devote to departmental politics. In addition, his style was to support the careers of his junior colleagues, not to promote his own (Jay S. Birnbrauer, personal communication, July 20, 2007). As Sloane observed,

Bijou’s pubs at Wash/Illinois were reduced because of his generosity and mentoring. He would sometimes be asked to write something and turn it over to others, usually younger staff needing to build a vita, or perhaps ask them to be co-authors. He was equally generous with ideas for studies. (Howard N. Sloane, personal communication, February 27, 2008)

As for Bijou’s publications at Illinois, these included some he had submitted and begun at Washington

(e.g., Orlando & Bijou, 1967) and excluded some he submitted and began at Illinois (e.g., Bijou, 1976). In addition, some works published in 1965 likely appeared before he arrived at Illinois (e.g., Bijou, 1965a), while some works published in 1975 likely appeared after he left (e.g., Bijou, 1975a). In any event, Bijou’s publications fall into three areas: (a) applied behavior analysis, especially in education, (b) child development, and (c) research methodology.

#### *Applied Behavior Analysis*

Although Bijou played a prominent role in founding applied behavior analysis through his research and training programs and his research administration, he did not, himself, publish much research at Washington. Moreover, at Illinois, he published only applied research that had been conducted at Washington, notably, “Behavior Therapy in the Home: Amelioration of Problem Parent–Child Relations with the Parent in a Therapeutic Role” (Hawkins et al., 1966; see also Sloane, Johnston, & Bijou, 1967). This is today his second most cited publication in the Web of Science; it was cited 190 times as of February 16, 2008.

Bijou was nonetheless active in advancing the field. He edited *Behavior Modification: Issues and Extensions* with Emilio Ribes (Bijou & Ribes, 1972) and published reviews of applied research, mainly in retardation—for example, “Behavior Modification in the Mentally Retarded: Application of Operant Conditioning Principles” (Bijou, 1968b), which appeared in *Pediatric Clinics of North America*. This journal attested to the breadth of his audience, as did his well-cited chapter, “A Functional Analysis of Retarded Development,” in the *International Review of Research in Mental Retardation* (Bijou, 1966). He also contributed significantly to behavioral assessment, notably in a chapter with Peterson,

“Psychological Assessment in Children: A Functional Analysis” (Bijou & Peterson, 1971). Among his final publications at Illinois was a review of child behavior therapy with Redd (Bijou & Redd, 1975).

*Education.* In applied behavior analysis, Bijou published significantly on education. Among his contributions were the development of programmed materials and research on academic programming for children with developmental disabilities. Although prepared at Washington, his most cited research was published at Illinois: Bijou et al.’s (1966) “Programmed Instruction as an Approach to the Teaching of Reading, Writing, and Arithmetic to Retarded Children” (Web of Science, February 17, 2008). In regular education, Bijou’s most significant publication was an invited address to APA’s Division of School Psychologists: “What Psychology Has to Offer Education—Now” (Bijou, 1970b). Finally, in his last years at Illinois, he taught an undergraduate course on child development using Keller’s (1968) personalized system of instruction. This yielded still more publications (Bijou, Morris, & Parsons, 1976; Morris, Surber, & Bijou, 1978). Although he had enjoyed teaching in the traditional lecture format, teaching with PSI was “exciting”; students learned so much more (R. F. Peterson, 1998).

### *Child Development*

Bijou’s publications in the behavior analysis of development were anchored on one end by *Child Development: The Universal Stage of Infancy* (Bijou & Baer, 1965) and on the other end by *The Basic Stage of Early Childhood* (Bijou, 1976). Although the former was written at Washington, Bijou listed his affiliation as the University of Illinois. Likewise, although the latter was written at Illinois, he listed his affiliation as the University of Ar-

izona. The latter included chapters on exploratory behavior, curiosity, and play; cognitive behavior as abilities and knowledge; moral behavior; child behavior treatment; and preschool education. In between the two books, Bijou and Baer edited a 1967 book of readings, *Child Development: Readings in Experimental Analysis*. It included sections on basic principles and concepts (e.g., hereditary and operant processes), application (i.e., social and aberrant behavior and education), and operant methods in child behavior and development.

Among his notable articles and chapters in child development were, in chronological order, his highly regarded “Ages, Stages, and the Naturalization of Human Development” (Bijou, 1968a); an overview of the behavior analysis of child development (Bijou, 1968c); analyses of socialization (Bijou, 1970a) and intelligence (Bijou, 1971); a superb article on helping children develop their full potential (Bijou, 1973); and two articles published in 1975: “Development in the Preschool Years: A Functional Analysis” (Bijou, 1975a) and “Moral Development in the Preschool Years: A Functional Analysis” (Bijou, 1975b).

### *Research Methodology*

Bijou also contributed significantly to research methodology. In basic operant research, he published a comprehensive chapter with Baer in 1966 (“Operant Methods in Child Behavior and Development”) that reviewed the measurement strategies and experimental tactics he had developed in his analysis of child behavior (e.g., Orlando & Bijou, 1967). In applied behavior analysis, his most important methodological contribution was to advance the integration of descriptive and experimental research in his article with Peterson and Ault, “A Method to Integrate Descriptive and Experimen-

tal Field Studies at the Level of Data and Empirical Concepts" (Bijou et al., 1968), published in the inaugural issue of the *Journal of Applied Behavior Analysis (JABA)*. Of this, Wesolowski (2002) noted, "He was the first to describe antecedent-behavior-consequent (ABC) recording as a method of data collection to explore the three-term contingency with humans in natural settings" (p. 16). Bijou (2001) later cited this article as one of his two publications that had "the greatest impact on psychologists and students" (p. 117), the other being Bijou and Baer (1961). The article was the 17th most cited *JABA* publication in 1986 and 1993 (seab.envmed.rochester.edu) and is now the most cited of all his articles in the Web of Science (268 times, February 16, 2008). Its companion piece (Bijou, Peterson, Harris, Allen, & Johnston, 1969) is his third most cited article (103 times, Web of Science, February 16, 2007).

#### FURTHER SERVICE, AWARDS, AND RECOGNITION

As a result of his contributions to behavior analysis, Bijou was invited to provide service to the field and received numerous awards and recognition.

#### Service

*Editorial.* Bijou remained the editor of *JECP* until 1972, after which he served on its editorial board (1972–1976). He was also an associate editor of the *Journal of Behavior Therapy and Experimental Psychiatry* (1969–2000) and on the editorial boards of the *International Review of Research in Mental Retardation* (1966–1970), the *Journal of Abnormal Child Psychology* (1973–1981), and *JABA* (1974–1977).

*Governance.* He continued to hold significant governance positions in SRCD (e.g., Program Committee, 1970–1971), APA (e.g., Finance Committee, 1972–1974), and APA Divi-

sion 7 (e.g., chair of the Credentials Committee, 1972–1973). As for the Association for Behavior Analysis (ABA), he was a member of the 1974 organizing committee of the Midwestern Association for Behavior Analysis (MABA), ABA's progenitor. In May that year, he took his graduate students to the University of Chicago, where he and they described their research in an auditorium filled with faculty members and students from other universities who did likewise. This was MABA's (and ABA's) first meeting, although the first convention was not held until the next year. In 1978, Bijou was elected ABA's third president.

*Consultant.* In addition, Bijou was a consultant to the NIMH Clinical Program Project Committee (1968–1973), National Program on Early Childhood Education (1969–1973), Educational Resources Information Advisory Board (1970), Johnny Cake Child Study Center Foundation (1974), state departments of mental health, and school districts, as well as to the Universidad Nacional Autónoma de México (1974) and the Universidad Central de Venezuela, Caracas (1974). He also continued to champion the Portage Project (see Bijou, 1980).

*Commissions and task forces.* Although not involved in APA Division 25 governance, Bijou chaired APA's 1974 Commission on Behavior Modification. Its members included the psychologists, Jerome Frank, James G. Holland, Leonard Krasner, Serena Stier, Stephanie B. Stolz, and G. Terrance Wilson; a philosopher, Hugh Lacey; and two lawyers, Paul Friedman and David Wexler. The commission was charged with reviewing legal and ethical issues in behavior modification, among them, client rights, the selection of treatment goals, and treatment evaluation. It concluded that behavior modification needed no more legal or ethical oversight than other human service professions (e.g., psychology, social

work, medicine) and thus recommended against issuing professional guidelines in behavior modification. Instead, it recommended that researchers and clinicians adhere to the ethical standards of their respective professions (Stolz & Associates, 1978; see Kazdin, 1978, p. 362).

In 1975, however, Bijou served on a task force that did establish professional guidelines. Based on allegations that staff members at the Sunland Training Center in Miami, Florida, were abusing residents in a token economy program, the Florida Division of Retardation formed a Resident Abuse Investigating Committee. It found that the residents were indeed being abused, but not by the token economy program or other behavioral treatments. They were being abused (e.g., corporal punishment, excessive restraints) by poorly trained and unsupervised staff members in one of the center's divisions. A joint task force was then formed and charged with developing procedures, safeguards, and recommendations for the state's provision of rehabilitation and behavioral services. Bijou served as a member. In collaboration with the Florida Developmental Services Program, the joint task force issued guidelines about, for instance, behavioral programming, program review committees, and a peer review committee (May et al., 1976; see Johnston & Shook, 1987; see Kazdin, 1978, pp. 368–369).

*International dissemination.* Bijou also played an increasingly significant role in advancing behavior analysis internationally. In 1967, he was instrumental in creating the Center for Special Education and Rehabilitation at the Universidad de Veracruzana in Xalapa, Mexico, which he visited several times. With Emilio Ribes, he established the Committee on the International Symposium on Behavior Modification in 1971 in order to

call the attention of faculty and students to behavior analysis and applied behavior analysis in the South American countries over a 10-year period. Topics were selected by psychologists in the host countries. Attendance ranged from 300 to 1,000, and the symposium generated several books. (S. W. Bijou, personal communication, April 4, 2008)

The first book was based on the first symposium held at Xalapa in 1971 (Bijou & Ribes, 1972). In addition, Bijou helped found the Department of the Experimental Analysis of Behavior at the Universidad Nacional Autónoma de México (Rayek & Ribes-Inesta, 1977).

Bijou's influence also extended to other South American countries (e.g., Brazil, Peru, Venezuela), Europe (e.g., Italy, Spain), and Japan. His publications in international journals (e.g., Bijou, 1967), coedited books (Bijou & Rayek-Zaga, 1978), translated works (e.g., Bijou, 1972a, 1972b), and service in hosting international scholars at the CBL were further evidence of the leading roll he took in advancing the field's internationalization.

#### *Awards and Recognition*

Bijou's research and scholarship earned him further awards and recognition. He was a visiting professor at the University of Hawaii in the summer of 1968 and an associate at the University of Illinois Center for Advanced Study while on a 1971–1972 sabbatical leave. In 1974, he received a research award from the American Association on Mental Deficiency and a Certificate of Merit from the Universidad de Veracruzana, the latter in honor of his contributions to behavior analysis in Mexico. For his many listings in *Who's Who*, see Etzel, LeBlanc, and Baer (1977, pp. 585–586). Bijou was also mentioned prominently in Kenneth Goodall's 1972 *Psychology Today* article, "Shapers at Work." Goodall's minibiography of him was this:



Joined Illinois faculty in 1965 after two years at Indiana U. and 17 years at U. Washington, where he was instrumental in building the university's reputation as a top-flight center for the application of behavioral techniques to problems of children. Conducted and directed numerous studies that led to the field. (p. 58)

In his interview with Bijou, Krasner (1977) concluded, "Bijou's influence on the work of investigators in this field has been so pervasive that he is among the three or four strongest sources of influence in behavior modification" (p. 587). For his contributions, Barbara C. Etzel, Judith M. LeBlanc, and Baer honored Bijou with a *Festschrift* in 1974. It was published in 1977 as *New Developments in Behavioral Research: Theory, Method, and Application*.

### BIJOU'S INFLUENCE AT ILLINOIS

Bijou's legacy at Illinois lies not only in his scientific and scholarly contributions, professional service, and awards and recognition, but also in his influence on undergraduate and graduate students, the CBL classroom teachers and research supervisors, and visiting scholars.

#### *Undergraduate Students*

The greatest number of the students he influenced were the undergraduates who took his child development course. When he used PSI, this also included the many talented proctors for the course, among them Mary Jane (Buy) Kenney, who remarked,

A vivid memory of mine was when I first enrolled in his course as a student. Dr. Bijou's first words were: "Everyone in this course can receive an A." I now realize how powerful his words still are today as he then introduced us to a concept which is still relevant, although perhaps stated differently, the Personalized System of Instruction (Mary Jane Buy Kenney, personal communication, April 28, 2008).

Kenney knows this first hand. She had a child who was developmentally challenged, but who is now in college,

double-majoring in Environmental Science Policy and Public Policy, with plans to attend law school. Of him, she wrote, "His accomplishments are unparalleled. It all goes back to the fact that 'Everyone can get an A' if provided the appropriate personalized system of instruction! Thank-you Dr. Bijou!" (Mary Jane Buy Kenney, personal communication, April 28, 2008).

Of students such as Kenney and others from Bijou's child development course who worked at the CBL, Sajwaj observed,

When I arrived in the fall of 1968, there was a plethora of bright, eager, and hard-working undergraduate students that Sid had already influenced. With students like that, conducting behavioral research, demonstrations, and therapy was a breeze. Sandy Twardosz is the most obvious example. While I don't know the fate of most of these undergraduates, I am sure that they made many large and small contributions, perhaps not to applied behavior analysis, but certainly to the welfare of children in general. All thanks to Sid's influence. (Thomas E. Sajwaj, personal communication, October 18, 2007)

Sajwaj was prescient: Many of them went on to receive advanced degrees, both at Illinois and at other universities. Among them were Steve and Cassie Braam, who received their doctorates in psychology at Western Michigan University (see, e.g., Braam & Poling, 1983; Braam & Sundberg, 1991). Another was Sandra Twardosz, who conducted published research at Illinois (Twardosz & Sajwaj, 1972) and went on to earn a doctorate in developmental and child psychology from the Department of Human Development and Family Life (now Applied Behavioral Science) at the University of Kansas. When asked about Bijou's influence on her, she wrote,

I was in Dr. Bijou's child development course at the University of Illinois and then worked in the Child Behavior Laboratory, primarily as a research assistant under the supervision of Dr. Thomas Sajwaj. It was in that setting that I did my first direct observations of behavior,

and experienced the euphoria of realizing that a behavioral procedure I had implemented resulted in change in a child's behavior [see Twardosz & Sajwaj, 1972]. Although I did not work directly with Dr. Bijou, he had a very large influence on my choice of career because of the opportunities he provided. (Sandra Twardosz, personal communication, June 6, 2007)

Since receiving her doctorate, Twardosz has been a faculty member in the Department of Child and Family Studies at the University of Tennessee, where she has published research often in the spirit of Bijou's work (e.g., Nordquist, Twardosz, & McEvoy, 1991).

Other undergraduate students remained at Illinois to earn doctoral degrees with Bijou (see below) or other faculty members. Fred P. Orelove, for example, worked at the CBL from 1970 to 1972 and then earned his doctorate in the Department of Special Education, advised by Barbara C. Wilcox, one of Bijou's doctoral students. He recalled that Bijou seemed to be "the wizard behind the curtain. That is, I rarely saw him at CBL." This was because Bijou was, in part, on sabbatical leave. Orelove was prescient, though: "The big difference, of course, is that the Wizard of Oz was a fraud and SWB was the real deal." He continued,

But I was always aware of his presence and his influence on ... all of the folks at CBL. As I advanced in my undergraduate psychology program and read more of the primary sources (Bijou & Baer, Vols. 1 and 2, plus the book of readings, plus the journal articles), my appreciation for SWB and his role in the development of ABA grew.

I can think of three instances where his influence was esp. important. First, I was one of the first group of students, I believe, who went through the PSI child development course. Having achieved some reasonable level of proficiency. ... I then served as a T.A., testing students coming through the ranks. I believe I learned that information at a depth that allowed me to understand the concepts and to apply them—and to teach them to others—for years to come. ...

Second, I took his advice to heart ... about applying the ABA work in a field beyond

psychology, which led me, of course, to eventual graduate degrees in special education. Third, at a practical level, SWB was generous as I pursued graduate study. I focused my applications on those institutions where he had colleagues.

I do hold a soft spot for Bijou and what he created at Illinois. His work gave me a grounding that really served as a very useful foundation for the remainder of my professional career. (Fred P. Orelove, personal communication, January 4, 2008)

Orelove is now a professor of special education at Virginia Commonwealth University and director of the state's Partnership for People with Disabilities (see Orelove, Sobsey, & Silberman, 2004).

### *Classroom Teachers*

Bijou also influenced the CBL classroom teachers, notably, Linda N. Berner (see, e.g., Berner & Grimm, 1972) and Elizabeth (Libby) Nesselroad, now Street (see, e.g., Rayek & Nesselroad, 1972). When asked about Bijou's influence on her, Street recalled,

I was at CBL in its last year of grant funding. At the end of the year, I needed to stay in Champaign-Urbana because my husband was a doctoral student in music. Rick Amado, a student of Sid's, had been consulting at HEED (Help and Education for the Emotionally Disturbed) School, the first day treatment program in Illinois for emotionally disturbed children. He recruited me to direct the program when the position became available. I stayed there for three years and benefited from Sid's wise counsel on several occasions and was able to hire several Bijou-trained students when they completed their degrees. Bijou's influence continues with me to this day! (Elizabeth Street, personal communication, June 5, 2007)

Street completed her doctorate in educational psychology at West Virginia University as Julie Vargas's first student. She is now a professor of psychology and chief planning officer at Central Washington University, where she continues to contribute to behavior analysis as a scholar (e.g., Slocum, Street, & Gilbert, 1995) and consultant (e.g., Morningside Academy, Seattle, Washington; see Johnson

& Street, 2004). She also observed of the CBL:

As for stories about the CBL, I remember in particular the “bug-in-the-ear” technology which Sid had adapted from its original use to train counselors. (It was, I believe, first used by Kate Kogan at the University of Washington for that purpose—to train teachers and practicum students in the lab school.) Graduate students observed the classroom and communicated through a receiver (bug) the teacher or student wore in his or her ear. Graduate students used brief messages to prompt and reward appropriate behavior. For me, the thing I heard most commonly was “scan,” meaning to scan the room to see the action that I had missed but needed to attend to. (Occasionally, the graduate students took advantage of the communication system to send along less scholarly and certainly ornerier messages.) Even though I already had a teaching degree and had completed all of my doctoral coursework, the bug-in-the-ear coaching I received had the most profound and lasting effect on my teaching. Interestingly, Central Washington University had invested in the same technology by the time I arrived here in 1979 and used it until very recently to train teachers in the laboratory preschool, practicum students, and parents in effective classroom practices. (Elizabeth Street, personal communication, June 5, 2007)

### *Research Supervisors*

Bijou's CBL research supervisors were Sloane (1965–1966), Peterson (1966–1968), Sajwaj (1968–1970), and Grimm (1970–1972). Within the university, they were research assistant professors.

*Sloane.* Sloane received his doctorate in clinical psychology at Pennsylvania State University in 1959. After lecturing for 2 years at Southern Illinois University, he took a post-doctoral position at the Walter Reed Army Institute of Research with Joseph V. Brady and then became an assistant professor of biochemistry at the Johns Hopkins School of Public Health, conducting funded research on the effects of maternal nutritional deprivation on offspring (e.g., planaria). As already mentioned, at Illinois, he worked in CBL's temporary facilities, yet recalled that “one activity I enjoyed

other than the usual was Sid allowing me to have some input on the design of the Colonel Wolfe School” (Howard N. Sloane, personal communication, September 3, 2007). While at Illinois, he wrote up Sloane et al. (1967) and collaborated with MacAulay on their edited book, *Operant Procedures in Remedial Speech and Language Training* (Sloane & MacAulay, 1968). He left in 1966 for the University of Utah, from which he retired in 1997.

*Peterson.* Peterson received his doctorate in psychology at Washington in 1965 and then took a position in its School of Nursing. As Sloane was preparing to leave Illinois, Bijou invited Peterson to take Sloane's place, which he did. At Illinois, Peterson conducted classroom and clinical research (e.g., R. F. Peterson, Cox, & Bijou, 1971; R. F. Peterson & Peterson, 1968) and later, as an Illinois faculty member (1968–1971), he taught a graduate seminar on behavioral sociology, using Burgess and Bushell (1969), that was taken by many of Bijou's students. Peterson recalls Bijou as “one of those ‘gentle giants’ in the profession” who pioneered by following “the road less taken” (Robert F. Peterson, personal communication, August 31, 2007). He commented also that Bijou was a “cautious scientist” and later offered this anecdote about Baer et al.'s (1967) classic article on generalized imitation: “I remember that Sid was cautious that we had actually accomplished generalized imitation. He asked me on two occasions to take him out to Fircrest School where the subjects lived and show him what the kids had accomplished and of course I did” (Robert F. Peterson, personal communication, February 27, 2008). Peterson left Illinois in 1971 to establish the Child Behavior Clinic at the University of Nevada–Reno, from which he retired in 1999.

*Sajwaj.* Sajwaj received his doctorate in developmental and child psychology from the Department of

Human Development and Family Life at the University of Kansas. At Illinois, he published research he had begun at Kansas (e.g., Herbert et al., 1973), as well as that conducted at Illinois (e.g., Sajwaj, Twardosz, & Burke, 1972). For him, Bijou's preschool was

a model for a therapy delivery system. If there is any kind of theme to my career, it was an attempt to integrate the principles of applied behavior analysis into real world service organizations. The Sajwaj, Schnelle, McNees, and McConnell (1983) article was a successful attempt. (Thomas E. Sajwaj, personal communication, October 18, 2007)

In 1970, he took a faculty position at the University of Mississippi Medical Center and later moved into administrative and professional positions at the Frank Luton Community Mental Health Center in Nashville, Tennessee, and the Tennessee Valley Authority in Chattanooga. After teaching part-time at the University of Tennessee in Chattanooga, he is now retired.

*Grimm.* Grimm received his doctorate in psychology from West Virginia University. At Illinois, he published in the areas of behavioral assessment and diagnosis, academic programming, and problem solving (e.g., Bijou & Grimm, 1975; Grimm & Bijou, 1972; Grimm, Bijou, & Parsons, 1973). When the CBL closed in 1972, he moved to Ontario, Canada, to work at the Thistletown Regional Centre; then to Brainerd, Minnesota, to work at the Minnesota Learning Center; and finally to Hendersonville, North Carolina, to work at Trend Community Mental Health Services, where he became its chief executive officer and from which he is presumably retired.

### *Visiting Scholars*

Sajwaj noted that Bijou engaged in "tireless promotion of applied behavior analysis nationally and internationally. Visitors were there [CBL], it seemed, constantly ... there were way

too many to count" (Thomas E. Sajwaj, personal communication, October 18, 2007; see Wesolowski, 2002). Among them were Tadashi Azuma from Japan (see Azuma, 1975); Arthur L. Miller, a social psychologist; Emilio Ribes (Universidad de Guadalajara, Mexico); and Kaoru Yamaguchi (Seisa University, Ashibetu-shi, Hokkaido, Japan).

Ribes is today a leading behavior analyst and interbehavioral psychologist in Mexico, where he has made contributions in basic and applied behavior analysis (Bijou & Ribes, 1972; Ribes-Inesta & Bandura, 1976) and the analysis of behavioral development (Bijou & Ribes, 1996). Yamaguchi's background was in learning disabilities, not behavior analysis. He came to Illinois to work with Kirk. However, Kirk was going on leave, so he arranged for Bijou to sponsor Yamaguchi. Bijou brought him to CBL and introduced him to applied behavior analysis, autism treatment, and the Portage Project (R. F. Peterson, 1998). On his return to Japan, Yamaguchi founded the Japan Portage Association, which now has over 32 chapters and 1,600 members. He has also disseminated it to over 90 countries, mainly throughout Asia (see Yamaguchi, 2007; S. W. Bijou, personal communication, April 4, 2008).

### *Doctoral Students*

Bijou was, of course, a significant influence on his graduate students at Illinois, 12 of whom completed doctoral degrees with him. He was also the master's degree adviser for five of them and five others. The latter were William H. Crooks, Jeffrey M. Seibert, Russell M. Y. Loo, Steven A. Fisher, and Joanne K. Johnson Mead. For this paper, I gleaned what public information I could about his doctoral students from the Internet and then contacted them directly about their degrees and departments, the titles of their dissertations, and



present positions. I also asked them about Bijou's influence on them and for personal observations. I organize my findings into two groups of students—an early group of five students and a later group of seven. I list them in the order in which they received their degrees (or alphabetically, if in a same year).

*The early group.* 1. Ronald G. Silikovitz, 1969. PhD in clinical child psychology for a dissertation titled "Transfer of Stimulus Control from Visual Stimuli to Verbal Instructional Stimuli." After working for 10 years in clinical administration, he entered private practice, where he remains today, now in West Orange, New Jersey.

2. Grover J. (Russ) Whitehurst, 1970. MA and PhD in developmental psychology, the latter for a dissertation titled "Novel Verbal Behavior and Language Structure: A Functional and Theoretical Analysis." Having been a successful research psychologist (e.g., the development of language and reading skills in young children) and academic administrator, he was appointed in 2002 as the Director of the Institute of Education Sciences in the U.S. Department of Education.

3. Rodger K. Bufford, 1971. MA and PhD in clinical psychology, the latter for a dissertation titled "Discrimination History and Discriminative Light Cues as Factors in Non-reinforced Imitative Performance." Having followed his interests in clinical and spiritual interventions and outcomes, he is now a professor in the Graduate Department of Clinical Psychology at George Fox University.

4. Ellen E. Smiley, 1971. MA and PhD in developmental psychology, the latter for a dissertation titled, "Acquisition of Behavioral Chains by Young Children." A career faculty member at the City College of New York, she is now an associate professor in its Department of Psychol-

ogy and a faculty fellow in the Office of Academic Affairs.

5. Don R. Thomas, 1972. PhD in clinical psychology for a dissertation titled "Self-Monitoring as a Technique for Modifying Teaching Behaviors." As a faculty member and program administrator, he sought to enhance the quantity and quality of behavior analysts working in autism. He is now retired and in private practice in Decatur, Illinois.

*Bijou's influence.* As for Bijou's influence, some of the students' comments overlap, attesting to his common influence on them. Rodger Bufford, for instance, wrote,

For me, one of the things that Bijou was most helpful with was my writing. He would give detailed feedback on a couple of pages, then tell me to make similar corrections throughout the manuscript. When I returned the next draft he repeated the process. It likely was several drafts before he read the whole manuscript, but in the process my writing gradually improved. Without his guidance, ... I likely would not have accomplished much in terms of publication. (Rodger K. Bufford, personal communication, February, 2007)

Ellen Smiley reinforced this point: "He insisted upon such tight, clear, efficient writing. I have had a very atypical academic career, but have had opportunities made available because I am viewed as a good writer. I owe this to Bijou's mentorship of my communication, as well as my research and analytic skills" (Ellen Smiley, personal communication, March, 2007).

Russ Whitehurst wrote of a broader effect: "Bijou was very influential in my development as a scholar and in my way of thinking about public policy in education," which befits Russ's current position (Grover R. Whitehurst, personal communication, March, 2007). Don Thomas offered a similar comment related to his own professional contributions:

Bijou's child development course was the basis for my approaching clinical psychology as an exercise in applying operant learning theory to

increasing the skills of autistic and developmentally disabled children. His eyes helped me see clinical psychology as an appropriate field for applied behavior analysis. (Don R. Thomas, personal communication, February, 2007)

*Personal observations.* Of their personal observations about Bijou, Rodger wrote, "Bijou was unflappable, gracious, and consistently supportive" (Rodger K. Bufford, personal communication, February, 2007). Don agreed:

I recall him as a gentle man. I never heard him raise his voice or express criticism in a negative way. He went out of his way to be helpful. His feedback on sections of my dissertation was always available when promised, even if he gave up his own time to have it done. (Don R. Thomas, personal communication, February 24, 2007)

*The later group.* 6. Joseph A. Parsons, 1973. MA and PhD in developmental psychology, the latter for a dissertation titled "Development and Maintenance of Arithmetic Problem-Solving Behavior in Preschool Children." After several years in teaching and research, he became and remains the manager of Counseling Services at the University of Victoria in British Columbia, Canada.

7. Barbara C. Wilcox, 1973. PhD in developmental psychology. She pursued an academic career, working with adults with disabilities, and eventually became a professor in the Department of Special Education at Indiana University. She is now retired.

8. Terry D. Meddock, 1974. MA and PhD in developmental psychology, the latter for a dissertation titled "Instructions: An Examination of Their Effects on Children's Operant Discrimination Behavior." As a career faculty member in the Department of Special Education at Temple University, he worked at the intersection of behavior analysis and inclusive school practices and on online learning. He retired in the spring of 2008.

9. Ely Rayek, 1974. PhD in educational psychology for a dissertation titled "A Functional Relationship between an Attending Program and Reading." As a faculty member in the Department of Educational Psychology at the Universidad Nacional Autónoma de México, he pursued topics in preschool education and parent training, and eventually became the department's chairperson. He is now retired and in private practice.

10. Edward K. Morris, 1976. PhD in developmental psychology for a dissertation titled "The Discriminative and Conditioned Reinforcing Functions of Social Distance in Adult-Child Interactions." As a career faculty member at the University of Kansas, he now works in history and theory and is the chairperson of the Department of Applied Behavioral Science.

11. Howard S. Rosen, 1979. PhD in educational psychology for a dissertation titled "Reinforcement of Young Children's Diversity and Novelty in Easel Painting and Generalization to Drawing, Finger Painting, and Clay Construction." He now works at Hempfield Behavioral Services in Harrisburg, Pennsylvania.

12. Richard S. Amado, 1982. PhD in educational psychology for a dissertation titled "Some Collateral Effects of Four Academic Reinforcement Regimes." After a career in human services, developing interventions based in positive behavioral supports, he is now a global business consultant in St. Paul, Minnesota.

*Bijou's influence.* In response to my question about Bijou's influence on this group, Joe Parsons wrote, "Bijou taught me to have great respect for experimentation, principles, data, application, and for people. He taught this by applying the very principles we were exploring" (Joseph A. Parsons, personal communication, February, 2007). Terry Meddock wrote, "Dr. Bijou—I don't believe I ever called him Sid—gave me the skills to

continue my learning and teaching throughout my career with the solid foundation he provided in behavior analysis" (Terry D. Meddock, personal communication, March, 2007). Ely Rayek wrote, "He provided me with a naturalistic perspective on human behavior, one especially based in experimental research. He also introduced me to the work of Jacob Robert Kantor, with whom I had a close relationship during the last 10 years of his life" (Ely Rayek, personal communication, March 4, 2007). Rick Amado wrote: "Two things come to mind, the first is to teach behavior analysis to anyone showing an interest and the other is that other psychology systems can provide us with insights and point the way toward discovering functional relations" (Richard S. Amado, personal communication, February, 2007).

*Personal observations.* As for their personal observations about Bijou, Terry wrote, "I remember his seminar on verbal behavior which made me look forward to reading Skinner's *Verbal Behavior*, no small feat" (Terry D. Meddock, personal communication, March, 2007). Joe offered the following anecdote:

Bijou taught by example, and one lesson I learned from him was that behavior change can happen without punishment. Bijou was the master of using differential reinforcement to shape our repertoires and to sharpen stimulus control over our behavior. The best example I recall is when Bijou invited me to his office to present my first dissertation proposal to him. He had received the written proposal in advance, but he asked me to present it fully. I began by quickly reviewing the background studies and proceeded to my major research question dealing with the matching law and concurrent schedules of reinforcement. Then I described the complicated methodology that I hoped to use. It was after nearly 10 minutes that I realized that Bijou had not said anything: No praise, nods or smiles—no discouragement either. I continued on for another minute or two, now aware of my hypothesis that Bijou had me on extinction. Finally I said, "I think that I will go back and rethink this," to which Bijou emitted his first detectable response with a smile, "Good idea, Joe!" My second proposal

was successful. (Joseph A. Parsons, personal communication, February 26, 2007)

Rick offered another anecdote:

I left the U of I ABD with dissertation data in hand when Bijou retired. I planned to write up my dissertation in the next few months while on the job. Six years later I had not written a word and I had well exceeded the time limit to complete the Ph.D. I called Bijou in Arizona and told him I was ready to finish and I had no idea what to do. He took the time to coach me, discuss potential committee members with me and leave me with a clear course of action to complete my long overdue process. He never chastised or criticized my lack of progress; he got right to work with me on a course of action. I got the paper written and defended it within the next six months. It seems to me he was like that with everybody. (Richard S. Amado, personal communication, February, 2007)

## AFTER THE UNIVERSITY OF ILLINOIS

Bijou retired from the University of Illinois as a professor emeritus in 1975. However, for the next quarter century, he continued to teach, publish, and offer service in behavior analysis at the University of Arizona (1975–1993) and the University of Nevada–Reno (1993–2001) (Ghezzi, 2007). At Arizona, he was an adjunct professor of psychology and of special education and rehabilitation. He taught and conducted research, worked with graduate students and junior faculty members in psychology and special education, and published 55 more works (see, e.g., Bijou, 1989, 1992; Bijou & Ruiz, 1981). At the University of Nevada–Reno, he was a distinguished professor emeritus of psychology and helped Steve and Linda Hayes establish their behavior analysis program, taught and advised more students, and published 20 more works (e.g., Bijou & Ghezzi, 1999; Bijou & Ribes, 1996).

During these years, Bijou earned additional awards and honors from Japan, Mexico, and Venezuela. For instance, from Mexico, he received a 2000 honorary doctoral degree from

the Universidad Veracruzana. In the United States, he earned distinguished scientist awards from the American Academy of Mental Retardation and the American Association for Retarded Citizens; the esteemed G. Stanley Hall, Edgar A. Doll, and Don Hake awards from APA Divisions 7, 33, and 25, respectively; the International Development of Behavior Analysis award from ABA; and the Distinguished Service to Behavior Analysis award from the Society for the Advancement of Behavior Analysis.

Shortly after his wife, Janet, passed away on December 16, 2000, Bijou moved to Santa Barbara, California to live with his daughter, Judith (Jude) Anne Bijou. His son, Robert (Bob) Kenneth Bijou, lives further north in Mill Valley, California. Although Bijou no longer contributes formally to the field, he is still influential, corresponding with and receiving visits from former students and colleagues, historians of psychology, and scholars who seek his advice.

### CONCLUSION

This paper has extended the record of Bijou's contributions to behavior analysis beyond those generally found in the published interviews and his autobiographical works. Specifically, it covered his tenure at the University of Illinois between 1965 and 1975: his initial appointments, colleagues, and service; the CBL; grant funding and publications; further service, awards, and recognition; advancement of behavior analysis internationally; and influence on his colleagues, CBL teachers and research supervisors, visiting scholars, and students.

Although Bijou's Illinois years were his most productive to that point in his career in terms of publications and grant funding, his contributions at Illinois were, arguably, more refinements and exten-

sions of his work at Washington than they were ground breaking. This was his conclusion, though, not mine. As he related to R. F. Peterson (1998) about Illinois,

Well, our program went on pretty much the way it was set up in Seattle and we kept on pretty much doing much what we were doing there, but I don't think we were breaking new ground at that particular time. We were more or less consolidating and not in any sense doing anything different. I felt that my job was done, so to speak. At least we started the programs [at Illinois] and got them running and so on.

As is Bijou's style, he was too humble about these contributions. In that decade at Illinois, he "started and got running" demonstration and training classrooms, clinical and educational research and applications, and the careers of his colleagues, CBL teachers and research supervisors, and students. What he started and got running was more than a career's worth of contributions for anyone else. Moreover, his contributions have continued to influence the field through his colleagues and students at Illinois, and through their colleagues and students, and so on.

Despite my having extended Bijou's contributions to behavior analysis through his Illinois years, this paper is incomplete, both methodologically and as a biography. Methodologically, it is celebratory history, not critical history. As a result, it is more internalist than externalist and more great personal history than zeitgeist history (on historiography; see Morris, Todd, Midgley, Schneider, & Johnson, 1990). That is, it honors Bijou's contributions without critically examining them. It describes them from within behavior analysis, not in the context of psychology more generally or of society at large. It focuses on his work as a behavior analyst, not on the historical and cultural contexts in which he worked or in which behavior analysis existed at the time (see Rutherford, *in press*). As a result, much further research



remains to be conducted about his Illinois years—indeed, about all of his years.

As a biography, the paper has not recounted Bijou's 18 years at the University of Arizona or his 8 subsequent years at the University of Nevada-Reno. Indeed, to date, almost nothing has been researched and written about his contributions during those years (but see Ghezzi, 2007). Thus, even more history and biography—both celebratory and critical—remain to be written. That alone is a testament to Bijou's many, lifelong contributions to the field.

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